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THE

ONTARIO WATER RESOURCES

COMMISSION

WATER POLLUTION SURVEY

of the

VILLAGE OF ST. ISIDORE DE PRESCOTT

COUNTY OF PRESCOTT

1966

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Report on a water pollution survey of the village of St. Isidore de Prescott in the county of Prescott.

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ONTARIO WATER RESOURCES

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Report

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of the

VILLAGE OF ST. ISIDORE DE PRESCOTT

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COUNTY OF PRESCOTT

Division of Sanitary Engineering

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WATER POLLUTION SURVEY

of the

VILLAGE OF ST. ISIDORE DE PRESCOTT

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WATER POLLUTION SURVEY

of the

VILLAGE OF ST. ISIDORE DE PRESCOTT

INTRODUCTION

A water pollution survey of the Village of St. Isidore de Prescott was performed by OWRC staff on May 10, 1966, in order to locate potential and existing sources of surface-water pollution.

Unfortunately, a map of the village was not readily available for use in preparing this report.

INTERVIEWS WITH OFFICIALS

Discussions were held with the following officials during this survey:

Village of St. Isidore de Prescott

Mr. D. Bergevin, Reeve;
Miss M. Sabourin, Clerk-Treasurer.

Prescott and Russell Health Unit

Dr. R. G. Grenon, Medical Officer of Health and Director;
Mr. R. Leblanc, Public Health Inspector.

VILLAGE OF ST. ISIDORE DE PRESCOTT

This village is located approximately 40 miles east of Ottawa and 26 miles generally north of Cornwall. The 1966 Municipal Directory indicates that the population of the municipality was approximately 534 in 1965. Existing formerly as a police village, St. Isidore de Prescott was incorporated recently as a village.

Located within the watershed of the South Nation River, St. Isidore de Prescott is drained by two small tributaries of the Scotch River branch. These small watercourses are not utilized for any specific purpose within the village other than for conducting surface drainage flows.

WATER SUPPLIES

A privately-owned water works supplies approximately one-half of the village. This water supply is obtained from a 130-foot drilled well and is pumped to the distribution system without prior treatment. The chemical quality of this water is generally satisfactory, although the content of chloride and alkalinity is moderately high. The odour of hydrogen sulphide can be detected in water drawn from the well, but reportedly is not objectionable to the consumers. Although the bacterial quality of this water supply has been generally satisfactory in the past, coliform organisms have been revealed occasionally in samples collected at the well and from the distribution system.

Private wells are utilized in sections of the village which are not served by the communal water supply system.

SURFACE WATER DRAINAGE

Surface run-off flows drain to small tributaries of the Scotch River which itself is a branch of the South Nation River system. County storm sewers extend along the main street (Rue

St. Catherine) and conduct flows to a watercourse which has its source south-east of St. Isidore de Prescott near the hamlet of Dunvegan. In the northern part of the village, flows discharge to a watercourse which has its source within the municipality and pursues a northerly course to the Scotch River.

SANITARY WASTE DISPOSAL

Public works for collecting and treating sewage flows have not been provided. Reportedly, many of the residences located on the main street discharge sewage flows to the county storm sewer which extends to a watercourse. Sewage gains access to the small watercourse which flows in a northerly direction from the village at the northern corporation limit (Rue St. Isidore). Septic tanks and tile bed systems are utilized at most of the residences located on side streets.

The heavy clay and reported high ground-water table which predominate in this region are considerably less than ideal for the effective functioning of sub-surface sewage disposal systems. The inspection of new septic tank systems has been generally curtailed by the Prescott and Russell Health Unit due to the shortage of staff required for the environmental sanitation programme.

NEED FOR PUBLIC SEWAGE WORKS

It is unlikely that the sewage disposal problems existing in St. Isidore de Prescott will be effectively resolved until

sewage works are provided. The desirability of proceeding with such works was discussed with the municipal clerk-treasurer during this survey. Of special interest was the Provincial financing of sewage works which is attractive to many municipalities that are unable to assume the capital cost of such a project. For the convenience of the municipal officials, this method of financing is reviewed as follows:

In August, 1965, the Prime Minister of the Province of Ontario announced the establishment of a new policy for dealing with the financing, construction and operation of water and sewage works in the Province.

This policy allows the Ontario Water Resources Commission to construct certain works for municipalities or areas, with financing to be provided directly by the Province. The cost of supplying the works including amortization of capital costs together with operational and maintenance charges are to be recovered by rates determined on a usage basis. The projects are completely owned by the Province of Ontario, and any municipality proceeding on this basis signs a contract with the OWRC for service. The installations are operated at cost with appropriate provision for adjustments in rate.

The portions of sewage works systems to which this arrangement applies have been established as the outfall sewer, the treatment works, and the main connecting facilities from the

collection system to the treatment works.

The OWRC is proceeding with these programmes on the basis that no portion of the capital cost will be considered a debt to the municipalities concerned. Additional information may be obtained by contacting the Division of Project Development, Ontario Water Resources Commission, 801 Bay Street, Toronto 5, Ontario.

INDUSTRY

The principal industrial firm of concern in this survey is La Fabrique Laitiere de St. Isidore Ltee. According to information received, this plant is located within the corporation limits of the village whereas the industrial waste disposal facilities are situated in the Township of South Plantagenet. A plant sewer conducts flows to a ditch which terminates at a small tributary of the Scotch River.

PRIVATE OUTFALLS

Although some private outfalls to watercourses might exist within the village, such instances were not disclosed during this survey.

MUNICIPAL REFUSE DISPOSAL SITE

The site utilized by the village for refuse disposal is located in part of Lot 5, Concession 15, in the Township of South Plantagenet. An inspection of this refuse disposal operation was

made during this survey, and a report thereon was submitted subsequently to the village and township officials. The existing site and the adjacent area proposed for use are drained to Beaver Creek. It was recommended that an appropriate site should be acquired elsewhere.

SAMPLING PROCEDURE

Samples were collected on May 10 to determine the quality of waste outfalls and the influence exerted thereby on watercourses.

The weather was cloudy with some snowflurries and the maximum atmospheric temperature was approximately 45 degrees Fahrenheit.

SAMPLE RESULTS

Samples Collected for this Survey-Table I

Chemical analyses were performed at the Ontario Water Resources Commission Laboratory in Toronto. Bacteriological examinations were performed at the Cornwall Associate Laboratory of the Ontario Department of Health.

The presence of sewage was evident in the discharges from the two storm sewers which discharge to a watercourse near the south limit of the village.

The visual evidence of sewage in the small creek flowing northward from the village was confirmed by the sample results.

The quality of the discharge emanating from La Fabrique Laitiere de St. Isidore Ltee. to a small tributary of the Scotch River indicates that deoxygenating material was present in this flow which is supposed to be uncontaminated water from the plant.

Samples Obtained by OWRC Monitoring Programme-Table II

The laboratory results shown in Table II pertain to samples obtained both upstream and downstream from the sewer outfalls at Rue St. Catherine. The results indicate the adverse influence of the discharges from the two sewer outfalls here.

SUMMARY

A water pollution survey of the Village of St. Isidore de Prescott was performed by Ontario Water Resources Commission staff on May 10, 1966.

A privately-owned water works system serves approximately one-half of the village. Ground water is the source of supply. Although chlorination is not practised, water samples of adverse bacterial quality have been obtained occasionally at the source of supply and from the distribution system. Private wells are utilized in some sections of the village.

Municipal sewage works have not been provided in the village. The sewage from many premises gains access to storm sewers and flows thence to watercourses. The provision of adequate private sewage disposal systems has been difficult due to

soil conditions and limited space in many instances. The need for municipal sewage works is obvious.

Although the industrial waste disposal facilities associated with La Fabrique Laitiere de St. Isidore Ltee. are located beyond the village limits, the plant is situated within the village. The flows discharging from the plant sewer to a local creek apparently contain some waste.

The refuse disposal site operated by the village is located in the Township of South Plantagenet. The OWRC has recommended that another site should be obtained at a location where the quality of surface and ground waters will be protected.

RECOMMENDATIONS

1. Active consideration should be given to providing municipal sewage works at St. Isidore de Prescott.
2. The flows discharging from La Fabrique Laitiere de St. Isidore Ltee. plant to a creek should contain only uncontaminated water.
3. The village's refuse disposal site is generally unsatisfactory due to its proximity to Beaver Creek and, therefore, should be abandoned in favour of a more appropriate site.

Approved by: L. South

L. G. South, P. Eng.,
District Engineer,
Div. of Sanitary Engineering.

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VILLAGE OF ST. ISIDORE DE PRESCOTT

TABLE I

SAMPLE POINT NO.	DATE OF SAMPLE 1966	5-DAY B.O.D.	SOLIDS			BACTERIOLOGICAL EXAMINATION (MPN)	
			TOTAL	SUSP.	DISS.	TOTAL COLIFORMS PER 100 cc.	E. COLI
NSD.31.8	MAY 10	1.1	390	3	387	21	21
NSD.31.8W-1	MAY 10	110.0	1398	60	1338	39+	5
NSD.31.8W-2	MAY 10	45.0	1502	36	1466	39+	21
NSD.31.8+	MAY 10	1.6	366	2	364	39+	39+
NSS.28.2	MAY 10	122.0	1152	41	1111	39+	39+
NSS.28.2	MAY 26	165.0	1070	67	1003	11,000+	11,000+
NSF.31.51	MAY 10	66.0	1388	92	1296	39+	39+

NSD.31.8 CREEK FLOWING FROM DUNVEGAN-SAMPLED 50 FEET DOWNSTREAM FROM RUE ST. CATHERINE

NSD.31.8W-1 STORM SEWER OUTFALL TO AFOREMENTIONED WATERCOURSE AT RUE ST. CATHERINE-NORTHWEST SIDE

NSD.31.8W-2 " " " " " " " " " " -NORTHEAST SIDE

NSD.31.8+ CREEK FLOWING FROM DUNVEGAN-SAMPLED 50 FEET UPSTREAM FROM RUE ST. CATHERINE

NSS.28.2 DITCH FLOWING TO TRIBUTARY OF SCOTCH RIVER AT NORTH LIMIT OF VILLAGE

NSF.31.51 DISCHARGE FROM LA FABRIQUE LAITIERE DE ST. ISIDORE LTEE. TO LOCAL CREEK.

VILLAGE OF ST. ISIDORE DE PRESCOTT

TABLE II

SAMPLE RESULTS PERTAINING TO CREEK FLOWING FROM DUNVEGAN

(OWRC WATER QUALITY MONITORING DATA)

DATE OF SAMPLE	SAMPLE POINT No.	5-DAY B.O.D.	SOLIDS		NITROGEN AS N				DISSOLVED OXYGEN	WATER TEMP 0°C	COLIFORMS PER 100 ML MF
			TOTAL	SUSP.	FREE AMMONIA	TOTAL KJELDAHL	NITRITE	NITRATE			
Oct. 21, 1965	NDS.31.8	1.6	-	-	TR.	1.00	TR.	0.0	-	-	59,000
	NDS.31.8+	0.5	-	-	TR.	0.60	TR.	0.0	-	-	490
Dec. 20, 1965	NDS.31.8	3.0	468	-	0.36	0.91	TR.	1.1	11.0	0.0	15,800
	NDS.31.8+	1.4	664		0.03	0.39	TR.	1.0	11.0	0.0	830
Feb. 10, 1966	NDS.31.8	-	-	-	-	-	-	-	12.0	0.5	43,000
	NDS.31.8+	-	-	-	-	-	-	-	13.0	0.5	29,000
Mar. 22, 1966	NDS.31.8	2.4	388	88	0.23	0.33	0.01	0.30	10.0	2.0	8,000
	NDS.31.8+	1.8	420	34	0.23	0.33	0.01	0.28	9.0	2.0	80
April 15, 1966	NDS.31.8	-	352	<15	0.08	-	TR.	TR.	16.0	9.5	190,000
	NDS.31.8+	1.2	374	<15	TR.	-	TR.	0.0	15.0	9.5	16,000
May 3, 1966	NDS.31.8	1.4	368	<15	TR.	TR.	TR.	0.04	10.0	9.0	51,000
	NDS.31.8+	1.4	390	<15	0.02	0.40	TR.	0.05	13.0	9.0	22,000
June 14, 1966	NDS.31.8	24.0	456	34	0.50	2.95	0.02	-	7.0	21.5	1,060,000
	NDS.31.8+	1.8	404	24	0.05	1.30	0.0	-	8.0	21.5	730
July 5, 1966	NDS.31.8	-	374	15	0.50	2.80	0.0	0.0	4.0	19.0	NOT AVAILABLE
	NDS.31.8+	-	338	11	0.46	2.10	0.0	0.02	7.0	19.0	31,000

NOTE: NDS 31.8 - CREEK FLOWING FROM DUNVEGAN - 50 FEET DOWNSTREAM FROM RUE ST. CATHERINE
NDS.31.8+- CREEK FLOWING FROM DUNVEGAN - 50 FEET UPSTREAM FROM RUE ST. CATHERINE